

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A drive circuit for operating a resonant motor having associated motor circuitry, including a first winding and a second winding, the drive circuit comprising:

a coil drive circuit configured to operatively couple to the first winding of the motor circuitry for supplying a drive signal thereto;

a feedback circuit including at least a switch operable in a first and a second state and configured to operatively couple to the second winding; and

a control circuit operatively coupled to the switch and the coil drive circuit for providing a switching signal to said switch for switching between said first and second states, said control circuit providing a control signal to said coil drive circuit in response to a feedback signal received from said resonant motor, wherein a voltage value of said feedback signal varies when said switch is in the first state, and said voltage value of said feedback signal is held substantially constant when said switch is in the second state.

2. (Original) The drive circuit of claim 1, wherein said first winding is a drive winding, said second winding is a pick-up winding, and said switch is a transistor.

3. (Currently Amended) The drive circuit of claim 1, wherein [a voltage value of said feedback signal, generated by the feedback circuit, varies when said switch is in the first state, and said voltage value of said feedback signal is held substantially

constant when said switch is in the second state] said feedback circuit further includes an amplifier having at least one input, a resistor coupled in series to said amplifier, and a capacitor coupled in parallel to said amplifier, the amplifier providing said feedback signal to said control circuit.

4. (Original) The drive circuit of claim 1, wherein said control circuit includes a comparator for comparing a voltage value of said control circuit to a reference voltage value and for generating said switching signal according to the comparison.

5. (Original) The drive circuit of claim 4, wherein said reference voltage value is stored in a data storage device of a processor operatively coupled to said control circuit.

6. (Currently Amended) The drive circuit of claim [3] 1, wherein said switch is a transistor and said voltage value is indicative of the voltage across a capacitor in the feedback circuit.

7. (Currently Amended) The drive circuit of claim [1] 3, wherein [said feedback circuit further includes an amplifier having at least one input, a resistor coupled in series to said amplifier, and a capacitor coupled in parallel to said amplifier, the amplifier providing said feedback signal to said control circuit] during operation of the switch in the second state, the resistor, capacitor and amplifier are substantially isolated

from the second winding, and wherein the output of the amplifier during operation of the switch in the second state is substantially a sinusoidal waveform.

8. (Currently Amended) An improved optical code reader of the type having a laser light source for generating a laser output beam for scanning an optical code located in one of a plurality of focal planes of said optical code reader; an oscillating mirror for reflecting and directing the laser output beam in a direction suitable for reading said optical code; a resonant motor having associated circuitry, including a first winding and a second winding, for controlling the oscillation of said oscillating mirror; and a photo detector for detecting a reflection beam corresponding to the laser output beam reflected by said optical code, said photo detector having associated circuitry for generating a data signal corresponding to data components of said reflection beam, said improved optical code reader comprising:

a drive circuit for driving said resonant motor, said drive circuit comprising:

a coil drive circuit operatively coupled to the first winding for supplying a drive signal thereto;

a feedback circuit including at a least a switch operable in a first and a second state and operatively coupled to the second winding; and

a control circuit operatively coupled to the switch and the coil drive circuit for providing a switching signal to said switch for switching between said first and second states, said control circuit providing a control signal to said coil drive circuit in response to a feedback signal received from said resonant motor, wherein said control circuit includes a comparator for comparing a voltage value of said control circuit to a

reference voltage value and for generating said switching signal according to the comparison.

9. (Original) The optical code reader of claim 8, wherein said first winding is a drive winding, said second winding is a pick-up winding, and said switch is a transistor.

10. (Original) The optical code reader of claim 8, wherein a voltage value of said feedback signal, generated by the feedback circuit, varies when said switch is in the first state, and said voltage value of said feedback signal is held substantially constant when said switch is in the second state.

11. (Currently Amended) The optical code reader of claim 8, wherein said [control circuit includes a comparator for comparing a voltage value of said control circuit to a reference voltage value and for generating said switching signal according to the comparison] feedback circuit includes an amplifier having at least one input, a resistor coupled in series to said amplifier, and a capacitor coupled in parallel to said amplifier, the amplifier providing said feedback signal to said control circuit.

12. (Original) The optical code reader of claim 11, wherein said reference voltage value is stored in a data storage device of a processor operatively coupled to said control circuit.

13. (Original) The optical code reader of claim 10, wherein said switch is a transistor and said voltage value is indicative of the voltage across a capacitor in the feedback circuit.

14. (Currently Amended) The optical code reader of claim [8] 11, wherein [said feedback circuit includes an amplifier having at least one input, a resistor coupled in series to said amplifier, and a capacitor coupled in parallel to said amplifier, the amplifier providing said feedback signal to said control circuit] during operation of the switch in the second state, the resistor, capacitor and amplifier are substantially isolated from the second winding, and wherein the output of the amplifier during operation of the switch in the second state is substantially a sinusoidal waveform.

15. (Currently Amended) A method for operating a resonant motor having associated motor circuitry, including a first winding and a second winding, the method comprising the steps of:

applying a drive signal to said first winding of said resonant motor;

determining a voltage value of a feedback signal generated by said associated circuitry coupled to said second winding of said resonant motor;

processing the voltage value; and

varying current supplied to said resonant motor in accordance with said processing by switching a switch operatively coupled to said second winding of said resonant motor, wherein a voltage value of said feedback signal varies when said switch

is in a first state, and said voltage value of said feedback signal is held substantially constant when said switch is in a second state.

16. (Currently Amended) The method of claim 15, wherein said first winding is a drive winding and said second winding is a pick-up winding[, and wherein said step of supplying current to said resonant motor comprises the step of switching a switch operatively coupled to said second winding of said resonant motor].

17. (Currently Amended) The method of claim [16] 15, wherein [a voltage value of said feedback signal varies when said switch is in the first state, and said voltage value of said feedback signal is held substantially constant when said switch is in the second state] during operation of the switch in the second state, a resistor, a capacitor and an amplifier are substantially isolated from the second winding, and wherein the output of the amplifier during operation of the switch in the second state is substantially a sinusoidal waveform.

18. (Currently Amended) The method of claim [17] 15, wherein said switch is controlled by using a comparator for comparing said drive signal, or a processed version, with a reference voltage value.

19. (Currently Amended) The method of claim [18] 15, wherein a step of turning off current to said resonant motor coincides with the closing of a transistor operatively coupled to said second winding of said resonant motor.

20. (Currently Amended) A resonant motor comprising:
circuitry including a first and a second winding, said first winding having a terminal for connecting to a coil drive circuit for receiving a drive signal; and
a switch having a first terminal connecting said switch in series to said second winding, and a second terminal for connecting said switch to a control circuit for receiving a switching signal therefrom, said switching signal determining an operating state of said switch, said circuitry further includes an amplifier for providing a feedback signal to said control circuit.

21. (Original) The resonant motor of claim 20, wherein said control circuit provides a control signal to said coil drive circuit in response to a feedback signal received from said circuitry of said resonant motor.

22. Cancelled